FireStore™

DR-DV5000

DV Video Disk Recorder

USER GUIDE

FOCUS
enhancements

FireStore DR-DV5000 User Guide

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

IMPORTANT NOTICE
(For U.S.Model)
The serial number for this equipment is located on the bottom of the unit. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

CAUTION:
This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

NOTE:
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception,which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

INFORMATION TO USER
Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

CAUTION:
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- The use of optical instruments with this product will increase eye hazard.

THE ON/OFF SWITCH IS SECONDARY CONNECTED AND THEREFORE DOES NOT SEPARATE THE UNIT FROM MAINS POWER IN STANDBY POSITION.

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE A (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

IMPORTANT

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE.REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

IMPORTANT SAFETY INSTRUCTIONS

READ INSTRUCTIONS – All the safety and operating instructions should be read before the product is operated.
RETAIN INSTRUCTIONS – The safety and operating instructions should be retained for future reference.
HEED WARNINGS – All warnings on the product and in the operating instructions should be adhered to.
FOLLOW INSTRUCTIONS – All operating and use instructions should be followed.
CLEANING – Unplug this product from the wall outlet before cleaning. The product should be cleaned only with a polishing cloth or a soft dry cloth. Never clean with furniture wax, benzine, insecticides or other volatile liquids since they may corrode the cabinet.
ATTACHMENTS – Do not use attachments not recommended by the product manufacturer as they may cause hazards.
WATER AND MOISTURE – Do not use this product near water – for example, near a bathtub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool; and the like.
ACCESSORIES – Do not place this product on an unstable cart, stand, tripod, bracket or table. The product may fall, causing serious injury to a child or an adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.
CART – A product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the product and cart combination to overturn.

VENTILATION – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
POWER SOURCES – This product should be operated only form the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your dealer or local power company.
LOCATION – The appliance should be installed in a stable location.
NON-USE PERIODS – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
GROUNDING OR *POLARIZATION* –

- If this product is equipped with a polarized alternating current line plug (a plug having one blade wider than the other), it will fit into the outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- If this product is equipped with a three-wire grounding type plug, a plug having a third (grounding) pin, it will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.

POWER-CORD PROTECTION – Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit the product.
OUTDOOR ANTENNA GROUNDING – If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electric Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Fig. A.
LIGHTNING – For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
POWER LINES – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
OVERLOADING – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
OBJECT AND LIQUID ENTRY – Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
SERVICING – Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
DAMAGE REQUIRING SERVICE – Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.
- If the product has been dropped or damaged in any way.
- When the product exhibits a distinct change in performance – this indicates a need for service.

REPLACEMENT PARTS – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
SAFETY CHECK – Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.
WALL OR CEILING MOUNT – The product should not be mounted to a wall or ceiling.
HEAT – The product should be situated away from heat sources such as radiators, heat, registers, stoves or other products (including amplifiers) that produce heat.

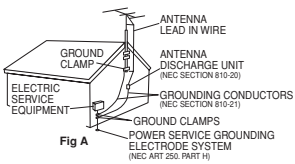
ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250. PART H)

Fig A

NEC — NATIONAL ELECTRICAL CODE

EMT **ELECTRO MAGNETIC TEST, INC.**
1547 Plymouth Street, Mountain View, CA 94043 Tel: (650) 965-4000 Fax: (650) 965-3000

Statement of Compliance

Presented to

FOCUS ENHANCEMENTS, INC.

The following model was tested and found to be fully compliant with:

- FCC Part 15 Class A
- ICES-003 Class A
- EN 55022 Class A
- EN 55024
- EN 61000-3-2 Class A & EN 61000-3-3

PORTABLE DV VIDEO HARD DISK RECORDER
M/N: DR-DV5000/FS3

Tested at Electro Magnetic Test, Inc. on June 9, 11, and 12, 2003

Certificate Number: 15971

Kevin Bothmann
Lab Manager

Jay Gandhi
President

RP-1

FOCUS Enhancements, Inc. warrants this product against defects in materials or workmanship as follows:

For a period of TWO years from the date of purchase, FOCUS Enhancements, Inc. will repair or replace the unit, at our option, without charge for parts or labor. After the period of TWO years, you must pay all parts and labor charges.

The limited warranty is extended only to the original purchaser. It does not cover damage or failure caused by or attributable to Acts of God, abuse, misuse, improper or abnormal usage, faulty installation, improper maintenance, lightning, or other incidences of excessive voltage, or any repairs or tampering by other than a FOCUS Enhancements authorized repair facility. It does not cover replacement of batteries or other consumable parts, transportation costs or damage in transit. This warranty will become void if the serial number or model number identification has been wholly or partially removed or erased. Repair or replacement under the terms of this warranty do not extend the terms of this warranty. This warranty can not be modified by an agent of FOCUS Enhancements, Inc. unless in written and signed by an officer of FOCUS Enhancements, Inc.

Should this product prove defective in workmanship or material, the consumer's sole remedies shall be such repair or replacement provided by the terms of this warranty. Under no circumstances shall FOCUS Enhancements, Inc. be liable for any loss or damage, direct, consequential, or incidental, arising out of the use of or inability to use this product. Some states do not allow limitations on how long an implied warranty lasts or the exclusions or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

For customers outside the USA or Canada, please contact your dealer or distributor for repairs or technical support. Refer to document MANL-0907-XX for a list of International Dealers and Authorized Service Centers.

In the United States or Canada, to obtain warranty service, call or write the FOCUS Enhancements, Inc. Technical Support Line for a Return Material Authorization (RMA) number. Technical Support can be reached at:

Email: support@FOCUSinfo. com
Telephone: 408-370-9963. 8AM-5PM,
Monday to Friday (PST)
(Hint: Mondays tend to be the busiest)
Fax: 408-866-4859
Address: FOCUS Enhancements, Inc.
1370 Dell Ave.
Campbell, CA. 95008

Please mark the RMA number clearly on the outside of the package. Include a copy of your sales receipt, a brief description of the symptoms, your name, address, phone number and any special shipping instructions. Then deliver or ship the product, postage and shipping costs prepaid, to a FOCUS Enhancements authorized repair facility. For the name of the nearest repair facility, contact FOCUS Enhancements, Inc. Technical Support.

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INTRODUCTION

Thank you for purchasing the Focus Enhancements FireStore DR-DV5000 DTE DV Video Disk Recorder for JVC full-size DV camcorders. DR-DV5000 adds a digital disk recorder/player for a powerful acquisition combination.

The purpose of this User Guide is to explain the features and operation of the FireStore DR-DV5000. You have also received a DR-DV5000 QuickStart guide which should be kept for quick future reference. Please study the contents of this User Guide before attempting to use your DR-DV5000.

Check the Focus Enhancements website regularly for updates to software and documentation and if you have questions or require further assistance with your FireStore DR-DV5000, please visit:

www.focusinfo.com/support

Alternatively, contact your Focus Enhancements or JVC FireStore dealer/distributor.

PACKAGE CONTENTS

Please take a moment to study the contents of your FireStore DR-DV5000 package. You should have the following contents:

- One (1) FireStore DR-DV5000 Unit w/ two (2) captive screws
- One (1) FireStore FSHDD-1 FireWire Hard Disk Drive (HDD)*
- One (1) Hardwire Remote Commander
- One (1) Infrared Remote Commander
- One (1) 6-pin to 4-pin Right Angle FireWire cable.
- One (1) 3.5mm to DB9 Serial Cable
- One (1) Battery Gasket
- One (1) GY-DV500/-550/-700 Adapter Plate w/ four (4) mount screws
- User Guide CD-ROM
- QuickStart Guide

If any of these contents are missing, please contact Focus Enhancements or your JVC FireStore dealer/distributor immediately.

You may need to purchase cables to connect more than one hard disk drive to FireStore DR-DV5000 at a time. Your Focus Enhancements dealer can help you identify additional cables you may need.

* Depending on the model number that is ordered, drive capacity may vary. Please verify that you have received the correct FireStore FSHDD-1 capacity that you ordered.

WHAT IS A DTE DISK RECORDER?

A DTE DV Disk Recorder is a device that allows you to record/playback DV video directly to/from a removable FireWire hard disk drive without using a computer. Video is input or output as a *DV Video Stream* through FireStore which writes/reads a DV data stream in NLE native file formats from/to a FireWire hard disk drive.

WHAT IS FIRESTORE DR-DV5000?

FireStore DR-DV5000 is a DTE DV Disk Recorder that mounts directly to JVC Full Size DV camcorders. With DR-DV5000, it is possible to:

• Input or output DV video from/to JVC DV camcorders such as the GY-DV5000, DV500, DV550 and DV700. It is also possible to use it stand-alone with virtually any DV video device

• Capture clips to hard disk at the acquisition stage - there is no need to capture later.

• Simultaneously record to disk while recording to your camcorder's tape

• Record clips to disk in DTE Technology based "edit-ready" file formats such as Raw DV, AVI Type 1, AVI Type 2, Matrox AVI, Canopus AVI, QuickTime and Avid DV-OMF. This means clips are immediately available to your NLE system without first having to transfer or convert the clips.

• Connect your FireWire disk directly to your computer or connect via FireStore which allows mount and dismount of the drives without re-cabling or computer re-boots.

• Jump from clip to clip without spooling through tape when in playback mode.

• As well as video, record and playback embedded DV audio in either 2-ch (16-bit, 48kHz) or 4-ch (12-bit, 32kHz) formats.

• Record source timecode from your camcorder or create your own Free Run, Regen or Rec Run timecode. It is also possible to preset timecode and user-bit values.

• Record, play and navigate using FireStore DR-DV5000's VTR style controls.

• Record and recall a single frame of DV video. Also record user definable time-lapse sequences.

• Slow playback down or speed it up by 1 frame per second increments.

• Use trick playback modes such as up to 30X/-30X fast-forward and rewind speeds, reverse play, loop clip and loop entire disk.

• Control DR-DV5000 remotely via FireWire (for triggering record/pause or AV/C) from a DV based camcorder GPI port. Alternatively, control DR-DV5000 via RS-232C (using the included 3.5mm to DB-9 cable), wired remote or infrared remote control.

• Daisy-chain up to four FireWire (IEEE-1394) hard drives (in addition to the internal removable FSHDD-1 FireWire hard drive) together for extremely long, uninterrupted record times.

BASIC APPLICATIONS

FireStore DR-DV5000 can be used both in the acquisition stage of production, the editing/post production stage and the presentation stage. FireStore DR-DV5000 is most useful in the following applications:

• Record DV video live to disk at the acquisition stage. Not only will you have an exact copy of your camcorder's tape footage on disk with the same timecode, audio and video information, it will be possible to quickly review shot footage back through your camcorder without risking damaging the tape in your camcorder's tape transport. This "confidence recording" will save time and reduce costly re-shoots during production.

• Clips are recorded in DTE Technology based "edit-ready" file formats such as RawDV, AVI Type 1, AVI Type 2, Matrox AVI, Canopus AVI, QuickTime or Avid DV-OMF. This will allow you to get your footage onto a computer (Mac or PC) and view or edit it quickly. The FireStore FSHDD-1 or external FireWire disk drive can either be connected directly to your computer (without FireStore) or through FireStore which allows you to mount/un-mount any connected drives without re-cabling or re-booting. This also allows you to capture footage to disk without tying up your computer.

• Playback DV video clips that were recorded to a connected FireWire hard disk drive from

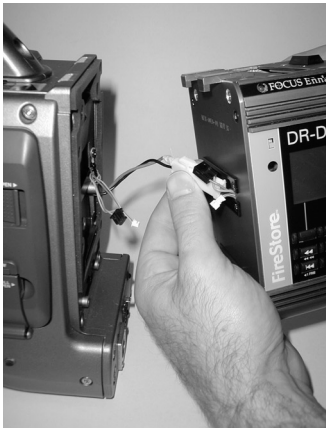
FireStore DR-DV5000 to any DV video device such as a mixer, camcorder or deck. Use FireStore's random access capabilities to navigate quickly from clip to clip without having to spool forward and backward through tape. Use FireStore DR-DV5000's trick playback modes such as multi-speed fast forward, incremental 1 frame per second slow motion and reverse play to present DV video in industrial, presentation or scientific applications.

MOUNTING TO A CAMCORDER

The FireStore DR-DV5000 is designed to mount directly to full size JVC Professional DV camcorders. When mounted to JVC GY-DV5000/ 5000E/ 5001 camcorders, the DR-DV5000 "hooks" to the rear of the camcorder in the usual position of the battery. These camcorders and DR-DV5000 also feature a 52-pin connector that allows unique communication between both devices. To mount to a Professional DV series camcorder, do the following:

1) Remove and disconnect the attached battery system from the camcorder. Consult either your camcorder's documentation or documentation from your battery system for more detailed information on removing the battery system. Leave the rubber gasket that was between the camcorder and battery system in place.

2) If you are using a JVC GY-DV500, 550 or 700, you will first need to add the supplied adapter plate to the rear of your camcorder (this plate will allow the DR-DV5000 to "hook" to the back of your camcorder.) Use the supplied four screws to mount. GY-DV5000 series camcorder owners can ignore this step.



3) DR-DV5000 features a two wire connector with black and red cables that connects main power between the DR-DV5000 and the camcorder. Connect this to the equivalent connector on the rear of your camcorder.

If you are using a digital battery system that passes battery life status to the camcorder, and are using a camcorder that is compatible with these systems, connect the following cables between DR-DV5000 and camcorder:

Anton/Bauer Digital Battery System
- Grey and Orange Cable

IDX Syncron Digital Battery System
- Blue and Red Cable

4) "Hook" the DR-DV5000 to the rear of the the GY-DV5000 camcorder. If you are using a JVC GY-DV5000 camcorder, use care to ensure that the 52-pin connector on DR-DV5000 mounts properly to the equivalent connector on your camcorder. Harness any loose cables into the "Hidey-Hole" on the DR-DV5000.

5) Once mounted, secure the two captive screws at the base of DR-DV5000 to the camcorder. Ensure that no cables are "pinched" between the DR-DV5000 and the camcorder.

6) Re-attach the battery system to the rear of the DR-DV5000. Ensure to connect all power cables and utilize the supplied gasket between DR-DV5000 and the battery system. Harness any loose cables in the "Hidey-Hole" on the rear of DR-DV5000.

7) Finally, connect a 6-pin to 4-pin FireWire cable from the 6-pin FireWire port on DR-DV5000 marked “DV I/O” to the 4-pin FireWire port on the rear of the camcorder marked “DV”.

This final step is necessary on all JVC GY-DV500, -550 and -700 series camcorders, but may not be necessary on certain JVC GY-DV5000 series camcorders. On certain models, DV input/output is done via the 52-pin connector between camcorder and DR-DV5000. Check with JVC for information on different models. A flexible wire clamp located on the DR-DV5000 base provides strain relief for the cable.

INSERTING AND REMOVING FIRESTORE FSHDD-1 FIREWIRE DRIVES

The best way to get to know the FireStore FSHDD-1 FireWire HDD is by studying the supplied manual. The manual provides detailed instructions and illustrations.

INSERTING THE HDD: Insert the drive into the slot on top of the DR-DV5000 unit. Ensure that the power switch on the bottom side of the drive is set to “On” before inserting. The drive will only insert one way and features a “key” on one side to prevent incorrect insertion. Press down on the drive handle firmly until the handle meets the top of DR-DV5000. If power is on, you will observe the power LED light up green.

REMOVING THE HDD: Slide the HDD release latch on the DR-DV5000 top plate toward the battery system. Once slid as far as

possible, hold the latch while at the same time grasping the FSHDD-1 drive handle and pulling the HDD out from DR-DV5000.

USING EXTERNAL FIREWIRE DISK DRIVES

In addition to using FireStore FSHDD-1 FireWire HDDs in the internal slot on DR-DV5000, it is also possible to connect any FireWire disk drive to the HDD I/O port on DR-DV5000. Power a single FireWire disk drive on DR-DV5000 at any given time (either internal or external). If external drives are being used as additional volumes to the inserted FSHDD-1 FireWire HDD, it will be necessary to provide external power to these drives. It may also be necessary to partition and format drives before use with DR-DV5000. See page 32 of this user guide for instructions on preparing drives before use.

NOTE: It is possible to "hot swap" both internal and external FireWire HDDs on DR-DV5000. Drives can be disconnected and connected from the system without the need to power cycle the unit. Ensure that DR-DV5000 is in STOP mode before removing a disk drive.

PHYSICAL FEATURES

Your FireStore DR-DV5000 features two main surfaces, the front panel and the rear connector panel.

FRONT PANEL

The front panel contains the backlit LCD and nine buttons for controlling FireStore's functions. The top row of buttons act as Soft Keys and provide the function displayed on the bottom of the LCD.

The front panel also features a tally light, infrared remote sensor and power switch.

1. Tally Light

The DR-DV5000 red tally light is located at the top of the DR-DV5000 front panel. In general, this light will flash when DR-DV5000 is in REC/PAUSE mode and be solid when in RECORD mode. This light is also used to warn the user when an error or warning message appears on the DR-DV5000 LCD display. See the ǎnd foe thge aV5000 red talle.

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When used with a JVC GY-DV5000 series camcorder, DR-DV5000 communicates with the camcorder first before power up or shutdown. In cases where the camera power is switched to off when DR-DV5000 is connected and ON, the camcorder will wait until DR-DV5000 is powered down first before powering both down. Again, this prevents errors occurring on particular files.

3. Infrared Remote Sensor

The DR-DV5000 infrared remote sensor is for use with the DR-DV5000 infrared remote commander. For information on the DR-DV5000 infrared remote commander, see “DR-DV5000 REMOTE CONTROL COMMANDERS on page 39 of this User Guide. This port can be disabled in infrared noisy environments if desired in the DR-DV5000 settings menu.

4. LCD Display Screen

The DR-DV5000 LCD screen displays status, setup and warning/error messages relating to DR-DV5000. The LCD backlight is set as default to ON, but this can be set to OFF or AUTO-OFF mode if desired. See page 30 of this User Guide for details.

5. Keypad Soft Key Function

The bottom line of the DR-DV5000 LCD screen displays Soft Key functions for the top row of buttons. Soft Keys allow the function of the top row of buttons to change depending on particular modes.

6. Keypad Soft Key

The top row of buttons on the DR-DV5000 front panel are dedicated Soft Keys. Soft Key functions change depending on what mode DR-DV5000 is in. Current Soft Key function is displayed on the bottom row of the LCD screen. The left key on the top row of buttons acts as a Soft Key and as the STOP key during record sessions. The right key also acts as a SHIFT key which allows Standard Keys to have a secondary function.

7. Keypad Standard Keys

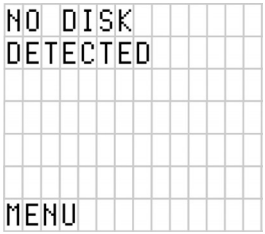
The bottom two rows of keys on the DR-DV5000 keypad have dedicated functions such as fast forward/back search, play, record, and index forward back. Each key (except record) also has a SHIFT mode which allows a secondary function to be performed.

LCD DISPLAY

The DR-DV5000 LCD screen displays different DR-DV5000 modes and states. On boot up, DR-DV5000 will display the following screen:

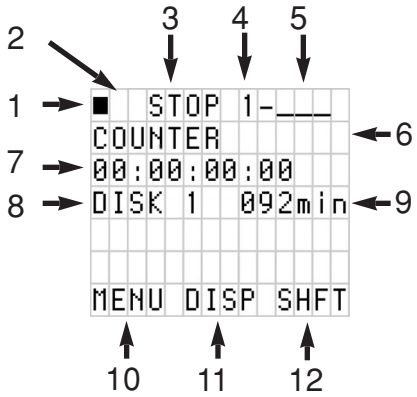
Depending on the connected disk drive, DR-DV5000 may or may not display “Please Wait” during boot up.

Once booted up, if no disk drive is connected to the DR-DV5000 (either through the internal slot or externally via the HDD I/O port), the following screen will appear:



Insert a FireStore FSHDD-1 FireWire HDD to the internal drive slot or connect a FireWire disk drive to the HDD I/O port. If a FSHDD-1 FireWire HDD comes from the factory, it should be configured and ready to use. If the message “No Disk Detected” appears, ensure you have a FSHDD-1 FireWire HDD inserted properly. If the message “No Format Detected” appears, you will first need to partition and format the inserted drive. DR-DV5000 will prompt you through the steps required to perform a format. **WARNING:** Formatting will erase all data on disk!

Once ready for use, the DR-DV5000 default Splash Screen will appear as follows:



1. Play/Record Status Symbol

This symbol displays a graphical representation of the current DR-DV5000 playback, stop, record or pause state.

2. Record/Play Status Indicator

In this space, DR-DV5000 will display a character that notifies the user what record or playback mode they are in. The characters displayed and their respective modes are listed on page 41 of this User Guide.

3. Current System Status

The current status of DR-DV5000 will be displayed in this area. For instance, it will display whether DR-DV5000 is in record, play, stop, pause, fast search or slow motion modes.

4. Volume Number

The volume or disk number of the current clip recording or playback session is displayed in this area of the LCD. For example, a display value of “2-014” identifies a track as being on volume 2.

5. Track or Clip Number

This area displays the current clip or track number being recorded or played back. For example, a display value of “2-014” identifies a track as being clip 14 on volume 2.

6. Timecode/User Bit Display Mode

This identifies the display mode for timecode or user bit values. Selections are:

• COUNTER - counts frames during record or playback of the current clip only.

• REMAINING - counts down the number of frames available (time) on a particular disk during a record session. In a playback session, this display shows the remaining time on the current clip.

• SMPTE NTSC (or PAL) - Displays the external timecode value being generated by a camcorder or other device during a record session. Timecode mode has to be set to EXT TC for this function to operate (see page 28 of this User Guide). In playback mode, this displays the embedded SMPTE timecode value in a particular track.

• UB NTSC (or PAL) - Displays the set user bit value in a particular clip. A user bit value must be added for this to display (see page 28 of this User Guide).

• ABSOLUTE - Displays an absolute timecode value for the particular session (sum of all COUNTER timecode on connected volumes). This is mainly used when DR-DV5000 is set to AV/C mode and is being controlled by an external FireWire device such as a computer.

7. Timecode or User Bit Value

Displays the timecode or user bit value of display mode selected.

8. Current Disk Volume

Displays the current disk volume in relation to available space.

9. Available Space on Volume

Displays the space in time available on the current volume.

10. Soft Key One Function Display

Displays the current function related to Soft Key one (left key on the top row of buttons). This is typically the main soft key for opening the DR-DV5000 MENU and is also used as a STOP key during record and playback sessions.

11. Soft Key Two Function Display

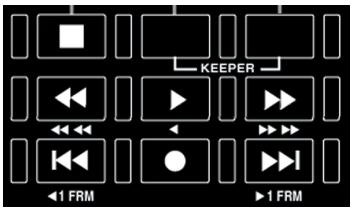
Displays current function of Soft Key two (middle key on the top row of buttons).

12. Soft Key Three Function Display

Displays current function of Soft Key three (right key on the top row of buttons).

FRONT PANEL BUTTONS

The DR-DV5000 front panel features nine buttons. The three buttons on the top row are "Soft Keys" which allow different functions to be controlled depending on the mode DR-DV5000 is in. Use the bottom line of the LCD display to identify the current soft key function. The remaining six buttons have a fixed function. Several of them also feature a secondary function that can be accessed by pressing the SHIFT key (usually the right Soft Key).



DR-DV5000 buttons have the following functions:

Soft Key 1 and STOP Key

Stops whatever is the selected mode and returns DR-DV5000 into Pause. A second press puts DR-DV5000 into STOP (standby with splash screen). Splash screen is the first frame of the selected clip. Key also acts as a dedicated soft key for triggering mode/function that appears immediately above key in the DR-DV5000 LCD display except during record and playback.

Soft Key 2

Dedicated soft key for triggering mode/function that appears immediately above key in the DR-DV5000 LCD display.

Soft Key 3 and SHIFT Key

Dedicated soft key for triggering mode/function that appears immediately above key in the DR-DV5000 LCD display. This key is also commonly used to enter the SHIFT mode. To execute a shift function, press SHIFT and another key at the same time.

NOTE: Pressing Soft Key (3) and holding followed by Soft Key (2) marks the current clip being recorded or played back as a keeper. The KEEPER label and a relational line between the two keys is silk-screened on the DR-DV5000 front panel. The LCD will mark this clip as a KEEPER clip. This would be a " * " after the track number…e.g. 1-012*.

Backward Search Key

Pressing the backward search button multiple times will result in increases in the search speed during playback. This mode is bidirex in forward X times normal search speed, a press of the Back Search button will result in FF speed being slowed down by one step. For instance, if user is in 10X FF speed and presses the Back Search button once, they will now be in 2X FF mode. This applies vice versa for backward search speeds. Speed resolution is as follows: (NTSC, PAL will have slightly different multiples for < 1X):

REVERSE : -30X, -10X, -2X, -1X (reverse play), -1/2X(-15fps), Still.

FORWARD: Still, +1/2X (+15fps), +1X (play), +2X, +10X, +30X

Forward Search Key

Pressing the forward search key multiple times will result in increases in the search speed during playback. This key has the same characteristics and bidirex function as the backward search key listed above.

Standard forward search and reverse search also have a "higher resolution" mode where more speeds are available. By pressing and holding the SHIFT key plus the forward or backward search key, the user has access to a larger number of playback speed choices. This mode is the same as Standard Forward Search in that it is also bidirex.

REVERSE: -30X, -25X, -18X, -15X, -12X, -10X, -8X, -5X, -4X, -3X, -2X, -1X, -15fps, -10fps, -6fps, -5fps, -3fps, -2fps, -1fps, Still

FORWARD: Still, +1fps, +2fps, +3fps, +5fps, +6fps, +10fps, +15fps, +1X, +2X, +3X, +4X, +5X, +8X, +10X, +12X, +15X, +18X, +25X, +30X.

NOTE: When using the DR-DV5000 remote control units, holding down the particular button will not repeat the function as it does on the DR-DV5000 control panel. For repeat sequences, the button must be pressed multiple times.

Play Key

Starts playback of the selected clip. By pressing and holding the SHIFT key plus the play button, DR-DV5000 will immediately go into reverse play mode.

Backward Index Key

Returns to the beginning of the current clip if in playback mode. Two presses in sequence will return to the previous clip during playback. In Stop mode a press will return to the beginning of the previous clip.

Forward Index Key

Skips forward to the next sequential clip for playback.

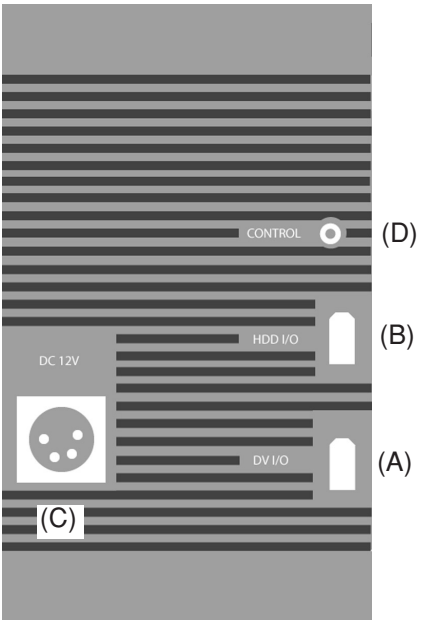
The forward index and backward index buttons also have a SHIFT mode where users can move one frame forward or one frame backward. When DR-DV5000 is in PLAY or PAUSE mode and the user presses and holds the SHIFT key plus the forward or backward index keys, it is possible to forward one frame or backward one frame with each press. If in PLAY mode, DR-DV5000 will immediately go into PAUSE mode on the particular frame.

Record Key

Pressing this button once puts DR-DV5000 into REC-PAUSE mode. A second press starts a recording session. If this button is pressed while a recording is in progress, DR-DV5000 will create a new clip on disk without dropping any frames.

REAR CONNECTOR PANEL

The rear connector panel features a 6-pin FireWire port for DV video I/O (A), a 6-pin FireWire port for connection of external FireWire drives or a computer (B), a 4-pin XLR DC power input (C) and a 3.5mm control cable input for RS232C or GPI (D).

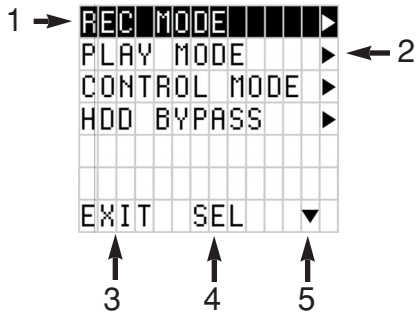


DR-DV5000 MENUS AND FUNCTIONS

FireStore DR-DV5000 features a comprehensive menu system which allows a number of features to be initiated and setup. To enter the DR-DV5000 MAIN MENU, press SOFT KEY 1 while in STOP mode. Available items in the MAIN Menu are:

REC MODE
PLAY MODE
CONTROL MODE
HDD BYPASS
REC FORMAT
SETUP
UTILITIES

The following MENU SCREEN will appear:



1. Current Menu Item
Indicates the currently highlighted menu item.

2. Sub-Menu Available
Indicates a menu item that has a sub-menu available. By pressing the SEL Soft Key, it is possible to enter the sub-menu.

3. Exit
Pressing EXIT will exit the DR-DV5000 MAIN MENU screen.

4. Select
Pressing SEL will select the current menu item. If a sub-menu is available, that will open. If a sub-menu is not available, this command simply enables or selects the menu item.

5. Scroll Arrow
This command allows for scrolling through menu items.

RECORD MODE MENU

The DR-DV5000 RECORD MODE MENU allows different record functions to be enabled. User simply selects the mode. Pressing SEL will open the sub menu. Pressing EXIT will exit back to the menu screen. Once a particular mode is selected in the Record Mode menu, the unit will remain in that mode until a different mode is selected.

Available items in the RECORD MENU are:
NORMAL REC
RETRO DISK
RETRO CACHE
SNAP
TIME LAPSE
DUMP TO DISK
DUMP TO TAPE

NOTE: When an inserted or attached HDD is nearly full, in some record sessions, the HDD time remaining may display “001min” remaining. If RECORD is triggered, DR-DV5000 will sometimes display NO SPACE LEFT. It is advised that when a disk drive is close to being full, other disk drives are readily available in order to avoid lost footage.

Normal Record

Standard and default record mode. When REC is triggered, DR-DV5000 begins standard recording. A single press of a STOP trigger will put DR-DV5000 into REC PAUSE mode. A second press puts DR-DV5000 into STOP mode.

Retro Disk Record Mode

RETRO DISK Record Constantly buffers video in a loop to a determined amount of space on the HDD so that when record is triggered, a retro time period can be added to the beginning of any clip.

RETRO DISK has the following characteristic. Pressing a REC TRIGGER when in RETRO DISK mode puts DR-DV5000 into a RETRO DISK state (DR-DV5000's tally light will flash as if in PAUSE state). DR-DV5000 is actually recording in this state, but until the RECORD TRIGGER is pressed a second time, the video recorded will record over itself in a continuous loop. RETRO DISK always keeps at least the amount of time that is selected by the end user in a series of one minute clips. For instance, if the user sets the RETRO DISK value to 3 minutes, they will always have 3 minutes (made up of three, one (1) minute clips) of video saved to disk. As the recording goes past the 3 minute point, a fourth clip is created. Once that clip reaches one minute, the oldest of the previous 3 clips is deleted. Another fourth clip is then created.

If a user selects a RETRO session that is 60 minutes or greater, instead of one minute clips, DR-DV5000 creates 9 minute, 13 second clips (2GB clips on disk). The characteristics of RETRO DISK remains the same. The larger file size prevents DR-DV5000 reaching its 999 track limitation for very long RETRO records. Due to the larger files sizes, the maximum amount of drive space available is decreased in order to accommodate the last recording in a session. For instance, if a user has 90 minutes of disk space remaining, after the user sets RETRO record to greater than 60 minutes, the available space changes to 88 minutes of available disk space. If the user sets RETRO time to 88 minutes, the recording will be made up of about nine and a half 9 minute, 13 second clips. There must be space available in this situation in order to record the final clip which eventually will right over clip 1. This ensures that at any given time, at least 88 minutes of video exists after a compete RETRO DISK record loop.

NOTE: DR-DV5000 must always have at least one minute of disk space (under 60 minutes) or 9 minutes, 13 seconds of disk space (when RETRO DISK value is set to greater than 60 minutes) remaining in addition to the RETRO DISK value that has been set, in order to function correctly. For instance, it is not possible to set a RETRO DISK value of one minute if only one minute of disk space remains.

Once RETRO DISK time is set, the user can exit the Menus and return to the Main Screen. An “L” will now appear next to the record symbol on DR-DV5000’s display. Pressing the REC trigger once will put DR-DV5000 immediately into RETRO DISK RECORD. Clips are being recorded to disk for X number of minutes in one minute increments (each as a separate track). The tally light will flash (as if the unit is in pause). When the REC trigger is pressed, DR-DV5000 will kick out of RETRO DISK mode and go into standard record. All one minute tracks in the set loop sequence will appear and be saved as their own tracks on disk (e.g. 1-001, 1-002, 1-003 etc.) except for the recording that was in progress, which takes on the characteristics of a standard track. At this stage, DR-DV5000 is essentially in standard record mode (the “L” on the display will disappear). No frames will be lost across tracks during the record session. Once paused, the unit will return to RETRO DISK record mode again (the “L” will reappear in the LCD and viewfinder) for further RETRO recordings or until it is disabled n the RETRO DISK Menu.

RETRO DISK can be used in LOCAL, SYNCRO SLAVE RECORD and SPLIT SLAVE RECORD control modes.

Retro Cache Record Mode

RETRO CACHE Record constantly buffers video in a loop to a 10 second data buffer to cache video so that when record is triggered, a retro time period can be added to the beginning of any clip.

RETRO CACHE has the following characteristic. Pressing a REC TRIGGER when in RETRO CACHE mode puts DR-DV5000 into a RETRO CACHE state (the TALLY light on DR-DV5000 will flash as if in PAUSE state). DR-DV5000 is actually recording in this state, but until the RECORD TRIGGER is pressed a second time, the video recorded will record over itself in a continuous loop. It is much the same as RETRO DISK recording in theory except that it utilizes a data buffer that is separate to the disk drive to cache video. RETRO CACHE is also accurate down to the frame instead of the 1 minute clips used in RETRO DISK. Once a RETRO CACHE value is set, pressing the REC trigger once will put DR-DV5000 immediately into RETRO CACHE Record. A “C” will now appear next to the record symbol on DR-DV5000’s display and also in the camcorder’s viewfinder. Video is being recorded to the DR-DV5000 cache. The tally light will flash (as if the unit is in pause). When the REC trigger is pressed, DR-DV5000 will kick out of RETRO CACHE record mode and go into standard record (the “C” on the display will disappear). Any clip that is recorded in this mode will have the contents of the cache added to the beginning of the clip. Once paused, the unit will return to RETRO CACHE record mode again (the “C” will reappear in the LCD and viewfinder) for further RETRO CACHE recordings or until it is disabled in the RETRO CACHE REC Menu.

RETRO CACHE RECORD can be used in LOCAL, SYNCRO SLAVE RECORD and SPLIT SLAVE RECORD control modes.

Snap

When SNAP is selected and REC is triggered, a single frame is grabbed. SNAP can be used with LOCAL, and SPLIT SLAVE RECORD control modes.

If SNAP is the RECORD MODE when power is cut to the unit or it is turned off, on re-boot, DR-DV5000 will be in NORMAL REC mode.

Time Lapse

It is possible to select a time lapse interval of up to twenty-four hours. Interval is the period of time between DR-DV5000's capture of a single frame of video (a value of 00:00:01:00 means one frame will be recorded every second). REC INTERVAL is set by the user pressing the up and down buttons. Time is selectable in seconds (up to 59), then minutes up to 59. Buttons can be released at any time to slow advance. EXIT will exit back to the menu screen.

Dump To Tape
NOTE: This feature is for use with JVC GY-DV5000 series camcorders only. Do not press DR-DV5000's REC button during a DUMP TO TAPE session.

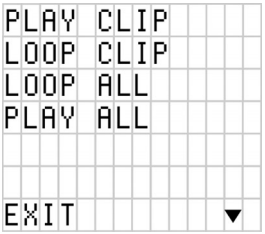
In order to use this mode, the GY-DV5000 camcorder must be in VTR Mode and a record inhibit tape must be in the camcorder. DUMP TO TAPE does not function when camcorder is in CAM mode. To initiate, user simply inserts tape to the DR-DV5000 transport and ensures a disk is inserted with footage. If DR-DV5000 is unable to perform DUMP TO TAPE, the DR-DV5000 LCD will display "DUMP INHIBIT". It is not possible to use SPLIT SLAVE modewith DUMP TO TAPE. The DUMP INHIBIT warning message will appear on the DR-DV5000 LCD display if no tape is present, the record inhibit tab on the tape is set to SAVE, the camera is not in VTR mode or the HDD is empty.

A grey picture with no audio will be recorded for approximately 10 seconds at the beginning of a DUMP TO TAPE session. During this 10 seconds, timecode is static.

Dump To Disk
NOTE: This feature is for use with JVC GY-DV5000 series camcorders only. Do not press DR-DV5000's REC button during a DUMP TO DISK session.

In order to use this mode, the GY-DV5000 camcorder must be in VTR Mode and there must be available disk space on the DR-DV5000 disk drive. DUMP TO DISK does not function when camcorder is in CAM mode. To initiate, user simply inserts tape. Tape will be rewound if required before the Dump to Disk process begins. If DR-DV5000 is unable to perform DUMP TO DISK, the DR-DV5000 LCD will display "DUMP INHIBIT". Before using DUMP TO DISK mode, ensure that DR-DV5000 record mode is NOT set to TIME LAPSE. It is not possible to use SPLIT SLAVE modewith DUMP TO DISK. The DUMP INHIBIT warning message will appear on the DR-DV5000 LCD display if no tape is present, the camera is not in VTR mode or the HDD is full.

PLAY MODE MENU



The DR-DV5000 PLAY MODE MENU allows different playback functions to be enabled. User simply selects the mode. Pressing EXIT will exit back to the menu screen. Once a particular mode is selected in the Play Mode menu, the unit will remain in that mode until a different mode is selected.

Available items in the PLAY MODE MENU are:
PLAY CLIP
LOOP CLIP
LOOP ALL
PLAY ALL

Play Clip

In this mode, DR-DV5000 will play the selected clip from start to finish when the PLAY button is pressed. At the end of the particular clip, DR-DV5000 will pause.

Loop Clip

In this mode, DR-DV5000 will play the selected clip from start to finish. Immediately after completing the clip, DR-DV5000 will begin playing the clip again without a pause. It will stay in this state until stopped.

Loop All

In this mode, DR-DV5000 will play the entire contents of the disk (all clips from the selected clips) in order from start to finish. At the end of the last clip, DR-DV5000 will begin to play from the beginning of the first clip again without a pause. It will stay in this state until stopped.

Play All

In this mode, DR-DV5000 will play the entire contents of the disk (all clips) in order from start to finish. At the end of the last clip, DR-DV5000 will pause.

CONTROL MODE MENU

The DR-DV5000 CONTROL MODE MENU allows different control options to be enabled. User simply selects the mode. Pressing EXIT will exit back to the menu screen. Once a particular mode is selected in the Control Mode menu, the unit will remain in that mode until a different mode is selected.

Available items in the CONTROL MODE MENU are:
LOCAL
AV/C
SYNCRO SLAVE
SERIES REC
SPLIT SLAVE

Local

In this mode, DR-DV5000 is controlled via the front panel buttons only. The camcorder tape transport and DR-DV5000 have independent control.

AV/C

AV/C is utilized in PLAYBACK and other situations where DR-DV5000 is controlled by an external FireWire device (such as a DV NLE system), connected to the "DV I/O port on DR-DV5000.
NOTE: AV/C is NOT for use in DR-DV5000 RECORD MODES.

Syncro Slaved

In SYNCRO SLAVED mode, the camcorder and DR-DV5000 share the same REC trigger and DR-DV5000 is slaved to the camcorder. Once set and the user exits the CONTROL MENU, they will return to the default splash screen. DR-DV5000 also immediately enters REC PAUSE mode and a "Y" appears next to the record symbol on the camcorder viewfinder and LCD (GY-DV5000 series only) as well as the DR-DV5000 LCD. All triggers of REC and REC PAUSE are controlled by the camcorder exclusively. Every time the camcorder REC button is pressed, DR-DV5000 goes into the particular RECORD MODE that is selected. When pressed a second time, DR-DV5000 goes into REC PAUSE. Another press of the REC button on the camcorder again starts the particular RECORD MODE that is selected. At this point, a new track is created on disk. Timecode generated by the camcorder is recorded to the file when DR-DV5000 is set to EXT TC mode.

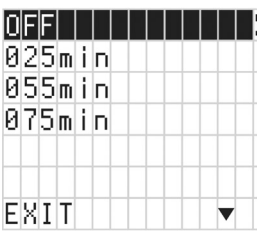
When used with RETRO DISK or RETRO CACHE modes, as soon as SYNCRO SLAVE is set, the camcorder begins recording to disk. A press of the REC trigger on the camcorder kicks DR-DV5000 out of RETRO DISK or RETRO CACHE and goes into standard REC. When the camcorder is triggered back into REC PAUSE mode, DR-DV5000 once again goes into RETRO DISK or RECORD CACHE mode again.

The DR-DV5000 buttons (other than MENU, DISP and SHFT) are locked out when in this mode, as is wired or infrared remote control units. If in VTR mode on the camcorder, all keys work. The user is only able to exit SYNCRO SLAVE by entering the CONTROL MENU which they can do directly by pressing the MENU button when on the DR-DV5000 default splash screen. If the camcorder is set to VTR mode, DR-DV5000's control panel becomes active in order to allow playback.

If a tape ends while using SYNCRO SLAVE mode, DR-DV5000 will continue to record. To STOP a recording, eject the tape in the transport and then it is possible to continue REC and REC/PAUSE functions on DR-DV5000 with the camcorder's VTR button and the camcorder is set to REGEN or PRST/REC.

NOTE: If DR-DV5000 is set to EXT TC when in SYNCRO SLAVE mode, EXT TC will stop once the tape in GY-DV5000 ends. Use a different TC mode when using SYNCRO SLAVE.

Series Record Mode



SERIES RECORD will start recording to disk automatically when a tape is close to the end of a record session. Once recording to disk has started, REC will continue until stop is pressed on DR-DV5000.

In SERIES RECORD mode, user simply selects the particular length tape they are using in the camcorder by pressing the down button. OFF disables the feature. EXIT will exit back to the default splash screen if SERIES RECORD is enabled. An “F” will appear in the camcorder’s viewfinder (GY-DV5000 series only) as well as the DR-DV5000 front panel LCD. RETRO DISK RECORD and RETRO CACHE RECORD are not possible with SERIES RECORD.

When in SERIES RECORD and on the default splash screen, pressing MENU will go directly to the SERIES RECORD menu. It is then possible to EXIT SERIES RECORD mode.

Split Slave

In this mode, DR-DV5000 is controlled by the camcorder, but separately from the camcorder’s tape transport. DR-DV5000 is slaved to the GY-DV5000 camcorder’s VTR button on the side of GY-DV5000. Every time this button is pressed, DR-DV5000 directly begins recording (not REC-PAUSE) in the particular RECORD MODE that is selected. When pressed a second time, DR-DV5000 goes into STOP mode (except in RETRO RECORD modes. Another press of the VTR button on the camcorder again starts RECORD again. At this point, a new track is created on disk.

When used with RETRO DISK or RETRO CACHE modes, as soon as SPLIT SLAVE is set, the DR-DV5000 begins recording to disk. A press of the VTR REC trigger button on the side of the GY-DV5000 camcorder kicks DR-DV5000 out of Retro Disk or Retro Cache and goes into standard REC. When the VTR trigger button on the side of the GY-DV5000 camcorder is triggered back into REC PAUSE mode, DR-DV5000 once again goes into RETRO DISK or RETRO CACHE mode. It is possible to play a tape back on GY-DV5000 and record to DR-DV5000 in SPLIT SLAVE mode.

HDD BYPASS

HDD Bypass mode allows the connected FireWire HDD to be mounted/dismounted to a computer without removing. In this mode, the computer connects to the HDD I/O port on the DR-DV5000 Rear Connector Panel. WARNING: Do not connect DR-DV5000 to a computer until the HDD port in the set up menu has been set to Bypass.

When HDD Bypass is selected, the following will display on the DR-DV5000 LCD:

If this screen does not appear, the DR-DV5000 HDD I/O port is set for use with external drives.

To set the HDD Port go to the Main Menu and select SETUP -> HDD PORT to set. User is prompted as in screen above: Once set, it will be possible to set DR-DV5000 to HDD Bypass mode.

Once in HDD Bypass mode, the following LCD display will appear:

To Exit this mode, simply press the EXIT key. Be sure to properly dismount the FireWire drive from the computer system first before exiting HDD Bypass mode on DR-DV5000.

RECORD FORMAT MENU

The RECORD FORMAT menu allows selection of particular DTE Technology native NLE file format prior to recording. All files are in the DV standard.

Available items in the RECORD FORMAT MENU are:
RAW DV
AVI TYPE 1
AVI TYPE 2
CANOPUS AVI
MATROX AVI
QUICKTIME
AVID OMF

User simply selects the format. Highlighted format is current format after exit. Pressing EXIT will exit back to the menu screen. Selected format will stay set until user selects a different format (even if the power is cycled).

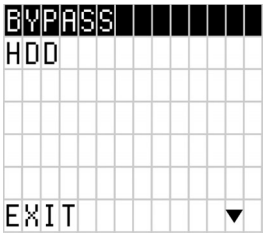
SETUP MENU

The SETUP MENU allows various functions of DR-DV5000 to be set. User simply selects the Setup Item. Pressing SEL will open the sub menu. Pressing EXIT will exit back to the menu screen. Unless mentioned, the particular setup menu will stay set until user selects a different setting (even if the power is cycled).

Available items in the SETUP MENU are:

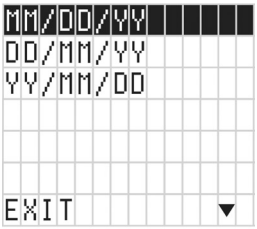
HDD PORT
DATE FORMAT
SET DATE&TIME
OS VERSION NO.
OS UPGRADE
CAM TYPE
TC MODE
TC SET
IR
GPI
BACK LIGHT
CLIP PREVIEW
AUDIO CORRECT

HDD Port



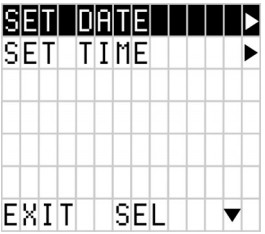
The HDD Port setting allows the user to assign a function to the DR-DV5000 "HDD I/O" port. BYPASS mode is for making the internal disk drive available to an external device (such as a computer). HDD Mode is used when the "HDD I/O" port is used for connecting external FireWire disk drives. Pressing EXIT will exit back to the menu screen.

Date Format

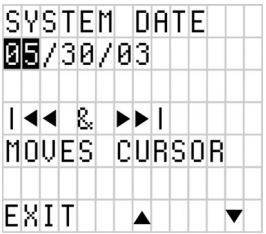


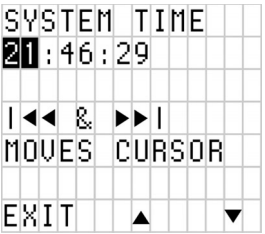
Allows user to select the different display options for date on the DR-DV5000 LCD. Setting only affects the LCD display. File name will always remain YYYYMMDD-HHMMSS.xxx (Year-Month-Date-Hour-Minute-Second). Pressing EXIT will exit back to the menu screen.

Set Date and Time



Allows for setting date and time for file naming purposes. Date and Time are set in different menus. Pressing the SEL button will open the sub menus.





Scroll from value to value using the FORWARD and BACK INDEX Buttons. Press DOWN and UP arrow to scroll though digits in value. Pressing EXIT will exit back to the menu screen. Regardless of display, file name will always remain YYYYMMDD-HHMMSS.xxx (Year-Month-Date-Hour-Minute-Second). User simply selects the Menu Item. Pressing SEL will open the sub menu. Pressing EXIT will exit back to the menu screen.

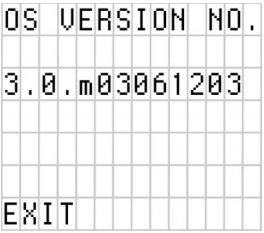
The Date and time form the basis of the DR-DV5000 file naming structure for use of clips on a computer.

On DR-DV5000, files are identified by TRACK and VOLUME (disk drive) number on the LCD. For instance, a file on the DR-DV5000 LCD identified as 1-043 is clip number 43 on Volume (disk) 1.

On a computer, files are identified by their base file name made up of DATE and TIME. For instance, a clip named 20030615-210943-01.mov is a clip that began recording at 9:09:43PM on June 15th. 2003.

NOTE: DATE/TIME is used when creating File name only. DR-DV5000 does not record this information into the stream. DR-DV5000 records DATE/TIME which is in the DV stream which is sent from the camcorder.

Operating System Version No.



Displays the current system software version.

Operating System Upgrade

To upgrade system software, the user must download a new .bin file to a FireWire drive on their computer. The latest version of DR-DV5000 software can be downloaded from http://www.focusinfo.com/support .

To install new OS software to DR-DV5000, do the following:

1) Download software from the Focus Website to your local computer.

2) Unzip file using WinZip (Windows) or Stuffit (Macintosh) on a computer system with a FireWire (IEEE-1394) connection.

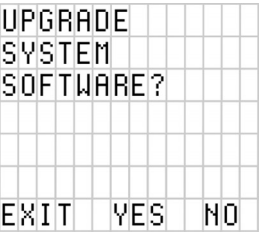
3) Rename the unzipped file called "XXXX.bin" to "dr-dv5k.bin".

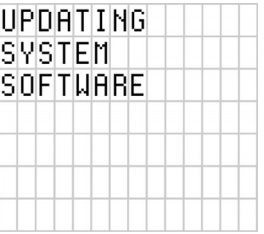
4) Connect a FireWire disk drive that has been used with DR-DV5000 to the computer and copy over the file "dr-dv5k.bin".

5) Disconnect FireWire drive from computer and connect to DR-DV5000. Power on DR-DV5000 as per normal.

6) Enter the DR-DV5000 menu and select "SETUP". From the SETUP menu, select "OS UPGRADE".

7) When prompted "DO YOU WANT TO UPGRADE SYSTEM SOFTWARE?" answer YES and YES to the erase current OS!! Upgrade will begin.

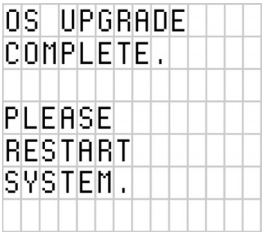




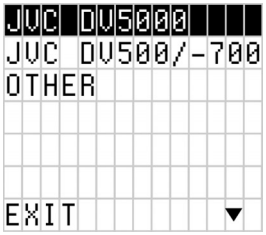
8) After upgrade is complete, power cycle DR-DV5000. The new software should now be loaded and ready to use.

NOTE: If you need to restore the factory default Operating System, hold down the Forward and Backward Index keys during boot up. If no .bin file is found, the screen

will display “OS UPGRADE ERROR”. It is necessary to restart your system once an OS upgrade is complete.

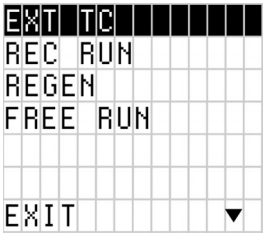


Cam Type



User simply selects the camcorder they will be using with DR-DV5000. This will load a preference for that particular model. The highlighted item is the current camcorder after exit. Pressing EXIT will exit back to the menu screen. Selecting JVC DV5000 or 500/-700 will set Timecode preference to SMPTE Timecode. Selecting OTHER will set Timecode preference to DV Timecode.

Timecode Mode



Allows user to select different timecode options for use when DR-DV5000 is recording. User simply selects the mode. Highlighted mode is current mode after exit. Pressing EXIT will exit back to the menu screen.

EXT TC Mode - Whatever the incoming DV timecode, DR-DV5000 records it. If the Camcorder TC is not running, and DR-DV5000 is recording, the same TC number will be in each frame of DV. Choosing EXT TC mode will clear any stored number. NOTE: If DR-DV5000 is set to EXT TC when in SYNCRO SLAVE mode, EXT TC will stop once tape in GY-DV5000 ends. Use different TC mode when using SYNCRO SLAVE. (TC Preset cannot be changed while in the EXT TC mode.)

REC RUN Mode - In this mode, DR-DV5000 does the following:

(1) the last timecode number recorded + 1 will be used as the timecode number for the first frame of the next recording.

(2) the number entered by a setting in the TC PRESET menu will be used for the first frame of the next recording.
The last number used is stored in the memory, so this mode persists across recording sessions.

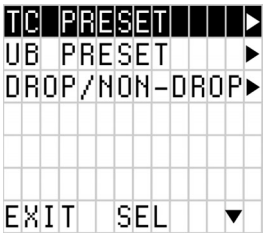
REGEN Mode - After a disk is mounted (at startup, upon manual connect) and after the track list has been constructed, DR-DV5000 looks at the last track and looks at the timecode number of the last frame in that track. DR-DV5000 stores that number for use as the TC value (+ 1) for the first frame of the next recording.

If the drive is empty, DR-DV5000 uses the value (+ 1) stored in memory.

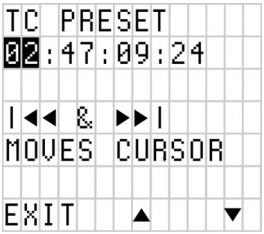
FREE RUN Mode - When the user enables FREE RUN mode, DR-DV5000 begins counting from the value stored. If the user uses the TC PRESET function, when the number is entered and the TC PRESET menu is exited, DR-DV5000 begins counting.

NOTE: When the DR-DV5000 timecode mode is set to EXT TC and the camcorder time code mode is set to PRST/REC or REGEN, it is not possible to record timecode continuously when recording to disk only. Set the DR-DV5000 timecode mode to REGEN, REC RUN or FREE RUN(not EXT TC) when recording to disk only.

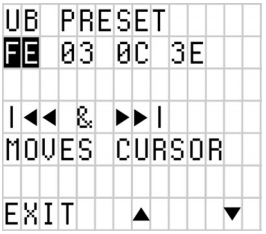
Timecode, UserBit and Drop/Non-Drop Preset



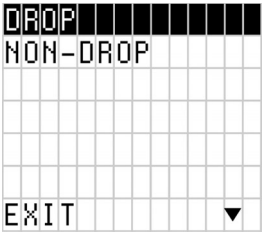
This menu allows the user to set timecode and user bit values for various modes. It also allows selection of drop or non-drop frame (NTSC only) settings. User simply selects the Menu Item. Pressing SEL will open the sub menu. Pressing EXIT will exit back to the menu screen.



Once a timecode value is set and DR-DV5000 is set to REC RUN or FREE RUN timecode settings, the preset value will be the starting point for timecode. Use the forward and back index buttons to move from value selection to value selection. Press the up and down arrows to set values.

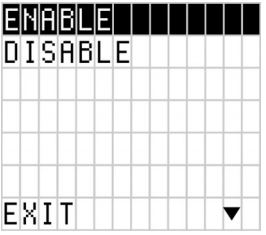


Allows the user to set a user bit value. Use the forward and back index buttons to move from value selection to value selection. Press the up and down arrows to set values.



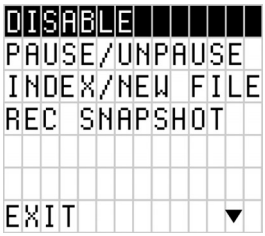
For DROP and NON-DROP, user simply selects the mode. Highlighted mode is current mode after exit. Pressing EXIT will exit back to the menu screen. This item not applicable for PAL use. On the DR-DV5000 display, DROP will be identified by a (.) symbol and NON-DROP by a (:) symbol.

Infrared Sensor Settings



This menu allows the user to ENABLE or DISABLE the IR sensor on DR-DV5000. User simply selects the Menu Item. Highlighted mode is current mode after exit. Pressing EXIT will exit back to the menu screen.

GPI Settings

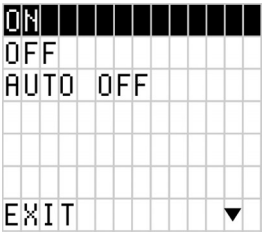


This menu allows the user to change the setting of the GPI port. User simply selects the Mode. Highlighted mode is current mode after exit. Pressing EXIT will exit back to the menu screen.

DISABLE allows user to connect the supplied 3.5mm to DB9 cable to the GPI port and control DR-DV5000 via RS232C from an external device.

The remaining three items allow functions to occur from a simple contact closure. Modes are PAUSE/UNPAUSE (allows control of pause and unpause during a record or playback session), INDEX (NEW FILE) (allows a new file to be created during a record session without losing any frames) and REC SNAPSHOT (allows a single frame of video to be recorded to a file. Each sequential trigger in this mode will add another frame to the same file until stopped).

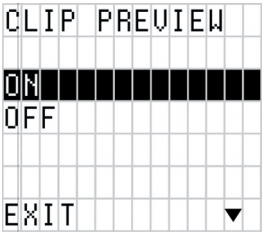
LCD Backlight Settings



This menu allows the user to enable or disable the DR-DV5000 LCD back-light. Highlighted state is current after exit. Pressing EXIT will exit back to the menu screen.

The ON setting will keep the back-light on permanently while the OFF setting will keep the back-light off permanently. AUTO OFF will turn off the back light after one minute. Pressing any keypad button on DR-DV5000 will turn the back-light back on in AUTO OFF state. This setting is advisable in high temperature environments and also to reduce power consumption.

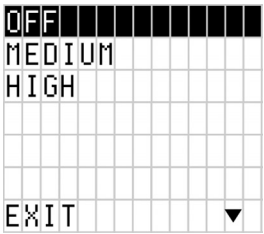
Clip Preview Settings



This menu allows the user to select CLIP PREVIEW ON or OFF. When CLIP PREVIEW is ON, the camcorder is in VTR mode and the user scrolls from one clip to the next on DR-DV5000 using the buttons, the first frame of each clip will be generated and showed via DV output after one second if the user pauses on that clip.

User simply selects the Mode. Highlighted mode is current mode after exit. Pressing EXIT will exit back to the menu screen.

Audio Correction Settings



This menu allows the user to change the AUDIO CORRECTION setting on DR-DV5000. User simply selects the Mode. Pressing EXIT will exit back to the menu screen.

AUDIO CORRECTION modes is an advanced feature of DR-DV5000. It is recommended that the customer uses the factory default settings for most operations (Factory default is MEDIUM). Audio Correction Mode allows the user to alter the performance of the audio error corrector while recording. It is useful when recording to DR-DV5000 from tapes with lots of dropouts. Error correction will only effect AVI 2, Canopus AVI, Matrox AVI, QuickTime and AVID OMF. It does not effect RawDV or AVI 1. The modes are:

OFF - No audio correction.

MEDIUM (default) - For “normal” clean tape played back on GY-DV5000 camcorder or other VTR with clean heads. Experiences occasional very short audio mutes.

HIGH - For cases where there are visible picture disturbances and likely long audio dropouts (1/2 sec and up).

UTILITIES MENU

The UTILITIES MENU contains various utility functions of DR-DV5000 to be set. User simply selects the Utilities Item. Pressing SEL will open the sub menu. Pressing EXIT will exit back to the menu screen.

Available items in the UTILITIES MENU are:

ORGANIZE KEEP
ORGANIZE OMF
DELETE CLIP
FORMAT
PARTITION
REPAIR
FILE NAME
FACTORY RESET

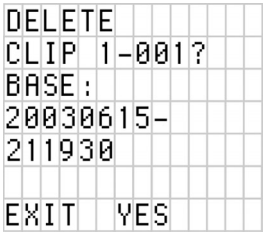
Organize Keeper Clips

Places all files that were identified as a KEEPER clip during recording or playback into a folder marked KEEPER on the disk drive. This folder can be imported directly into most DV NLE bins.

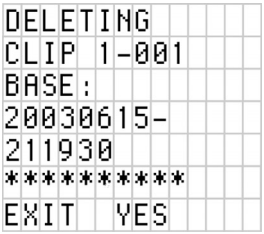
Organize OMF

When files are recorded in the AVID OMF file format, this command automatically takes all the OMF and AIF audio files at the end of a recording session and places them into a folder on the disk drive named “OMFI MediaFiles”. When the disk is connected to a computer, this folder is recognized by Avid Xpress DV’s Media Tool feature enabling direct import of files into the Avid timeline.

Delete Clip



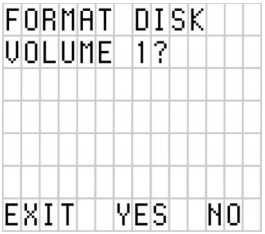
With this function, it is possible to delete the selected clip. In the DELETE CLIP X-XXX screen, user can select between clips by pressing the forward and back index buttons. Pressing SEL will begin the delete process. Pressing EXIT will exit back to the menu screen.
NOTE: FOCUS recommends not deleting clips frequently. It may cause fragmentation.



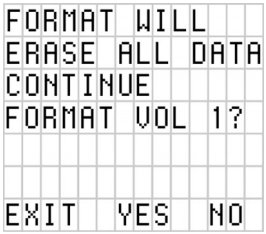
Once a clip has been deleted, the DR-DV5000 display re-organizes the clip number sequence. For instance, if there are three clips on disk (1-001, 1-002, 1-003) and the user deletes clip 1-002, after delete is complete, clip 1-003 will become clip 1-002. Base file names are not affected however.

Format Disk

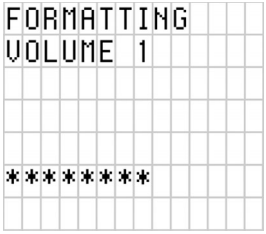
With this function, it is possible for the user to format a disk. It is recommended that this is done after each record session to prevent fragmentation and other problems with the disk drive.
WARNING: FORMAT ERASES ALL DATA ON THE DISK DRIVE!



To exit from format, press either NO or EXIT. To continue with format, press the YES key.



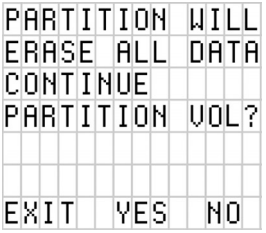
To exit from the warning screen, press either NO or EXIT. To begin the format, press the YES key.



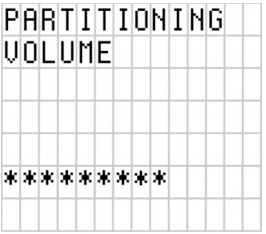
FireStore DR-DV5000 utilizes a FAT32 format type. If you are using a non-FAT32 formatted drive, see the section on Partitioning a volume. Once complete, the disk drive is ready for use with DR-DV5000. It is advised that the drive be formatted before a new record session is begun.

Partition Volume

When an unknown or blank volume type (HDD) is connected to DR-DV5000, the Partition process puts a FAT32 format onto the drive. It will erase any previous partition and data.

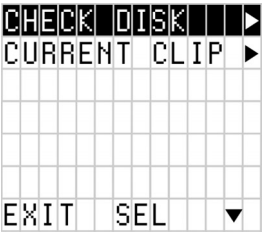


To exit from partition, press either NO or EXIT. To continue with partition, press the YES key.
WARNING: PARTITION ERASES ALL DATA ON THE DISK DRIVE!

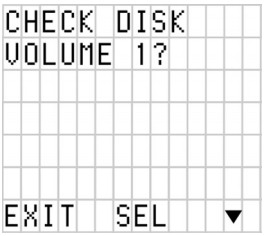


Once complete, the disk drive is ready for use with DR-DV5000.

Repair Disk



REPAIR allows the user to select either CHECK DISK or CURRENT CLIP.



CHECK DISK scans the entire volume for any errors (usually, if a disk was corrupted during a recording due to sudden power loss, check disk will alert the user of this). To exit check disk, press either NO or EXIT.

Fac

n error is found, the user will be promp
epair the file. File repair only takes a f
nents to complete in most cases.

function is sele DR-F
t all settings an
ctory default sta ress
actory reset. Pre sing EXI
from menu. Warning: Facto
t un-doable!!!

The fo" een will display ete:

milar functio
f an error is
the user to

efault States Are as Fo

splay:
• COUNTER

Rec Mode:
• DEFAULT RE E: NOR
• RETRO DISK – RETRO VALUE -> 000min
• R O CACHE – CACHE 00 sec
IME LAPSE –> 00:00

Play Mode:
• DEFAULT P Y CLIP

ame disp e of the
ed cli

C

MODE CAL
-> OFF

Rec Format:
• DEFAULT REC FORMAT: AVI TYPE 2

Setup:

• HDD PORT -> HDD
• DATE FORMAT -> MM/DD/YY
• SET DATE&TIME :
• DATE: 07/24/03
• TIME: 12:00:00
• OS VERSION NO. -> VARIABLE
• CAM TYPE -> JVC DV5000
• TC MODE -> EXT TC
• TC SET:
• TC PRESET -> 00:00:00:00
• UB PRESET -> 00 00 00 00
• DROP/NON-DROP -> NON-DROP
• IR -> ENABLE
• GPI -> DISABLE
• BACKLIGHT -> ON
• CLIP PREVIEW -> PREVIEW ON
• AUDIO CORRECTION -> MEDIUM

GETTING FIRESTORE RECORDED CLIPS ONTO A COMPUTER SYSTEM

Once you have recorded clips to your FireWire disk drive using FireStore, it is possible to use those clips in most computer based DV NLE systems.

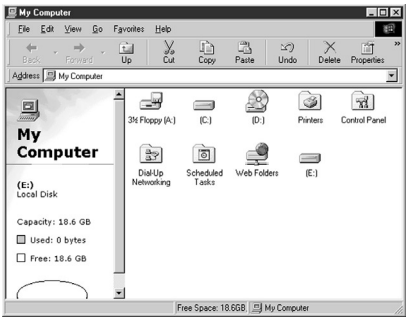
Traditionally, in order to get footage into your NLE system, it was necessary to capture or digitize that footage utilizing a video capture card. Using FireStore DR-DV5000 recorded clips, it is possible to skip this capture stage by simply connecting the FireWire disk drive to your computer via an OHCI compliant IEEE-1394 (FireWire) PCI card or connection. FireWire disk drives that were used with FireStore DR-DV5000 can be connected to any computer system that will read a FAT 32 volume. This includes Windows 98SE, Windows ME, Windows 2000, Windows XP and Mac OS9 and OS10. FAT32 volumes will not work with Windows NT and older Macintosh based operating systems. Check the FOCUS Enhancements' website (www.FOCUSinfo.com) for more information.

In order for you to use FireStore DR-DV5000 recorded FireWire disk drives on a computer, you must have an active IEEE-1394 connection on your computer. You also must have loaded any required FireWire disk drive drivers onto your computer system (Consult your FireWire disk drive documentation for more information).

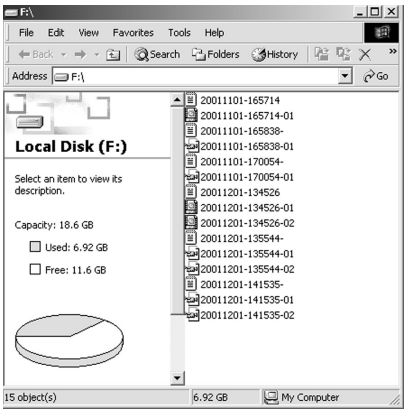
Simply connect your FireWire disk drive to your computer system utilizing a standard 6-pin to 6-pin FireWire cable and connect power to the drive if necessary (some FireWire disk drives receive power from the computer's FireWire connection. Consult your FireWire disk drive documentation for more information).

Mounting FireWire Disk Drives to Windows XP, 2000, 98SE and ME Computer Systems

On a Windows based computer system, simply double click the My Computer icon on the top left hand corner of the desktop. You will see the following window:



Locate your FireWire disk drive. This will probably be labeled (E:), (F:), (G:) etc. (drive C: is usually your computer's main disk drive). Once located, double click on the FireWire disk drive. (If you have trouble locating the FireWire disk drive, right mouse click each drive and select Properties from the menu. Click the Hardware tab which will list the drive type). Once opened, you should see the following window:



The FireWire disk drive contains several different files. Clips can appear as RawDV (.dv) AVI Type 1 (.avi), AVI Type 2 (.avi), Canopus AVI (.avi), Matrox AVI (.avi with a separate .wav audio file per track), QuickTime (.mov) and Avid OMF (.omf with two separate .aif audio files per track.).The FAT32 file system has a limitation where any particular file cannot exceed 2GB in size. This equates to roughly 9 minutes of recording time. When clips are being recorded to FireStore that exceed 9 minutes in length, FireStore automatically creates a new file without dropping any frames. The two clips will have the same primary file name, however, the last tow digits will be different. The first 2GB part of the clip will be labeled with "-01" after the primary file name. The second 2GB segment will be labeled with a "-02". Additional 2GB segments will be labeled with a "-0X" number.

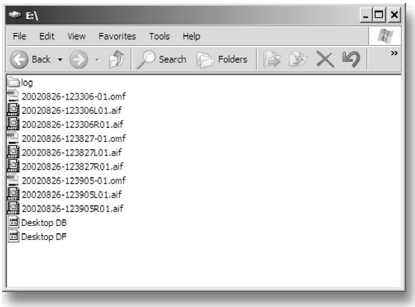
With most NLE systems on a Windows computer, it is possible to utilize clips within the timeline simply by selecting the clips on the source volume (in this case, the connected FireWire disk drive) and importing them directly into the NLE's bin. Clips can then be immediately used in the NLE's timeline. With FireWire disk drives such as the FireStore FSHDD-1, the drive itself is fast enough to directly stream the clips to the NLE eliminating the need to copy or transfer the clips before use.

When utilizing the Avid OMF file format, it is necessary to follow the following steps to import clips.

Using FireStore DR-DV5000 recorded Avid OMF clips on Avid XpressDV

The Avid DV OMF file format was developed for use with Avid Xpress DV version 3.0 or latter on Windows 2000, Windows XP or Mac 0S10. The Avid DV OMF file format creates three

files simultaneously; an OMF video file and two separate AIF audio files. On the computer's desktop, the files will look like this...



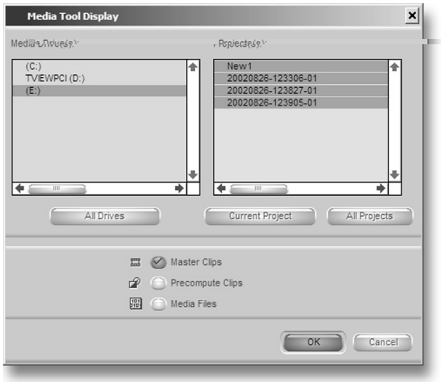
On the FireStore DR-DV5000, the video file (OMF) and the audio files (AIF) appear as one track. If you delete an Avid DV OMF file, FireStore will delete the audio and video portions at the same time.

In order to use the FireStore DR-DV5000 recorded Avid DV OMF files on your Avid Xpress DV system from the external FireWire drive, you must do the following…

1. Locate the external FireWire drive on your computer. (If you have trouble, you can locate the name of the external drive by selecting *My Computer* on a Windows system. On a Mac, the FireWire drive should appear on the desktop).

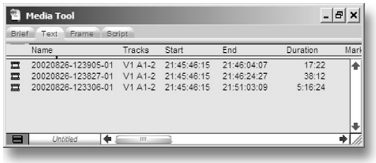
2. Open the FireWire drive when you have found it and create a new folder named "OMFI MediaFiles". To do this on Windows, select *File -> New -> Folder* from the pull down menu. On Mac, select *File -> New Folder*. It is important that "OMFI MediaFiles" is typed correctly in order for Avid to see the disk drive. Drag all the OMF and AIF files into the new folder (do not drag in the files titled Desktop DB or Desktop DF).
NOTE: if you are using the ORGANIZE OMF function on DR-DV5000 prior to using the disk on a computer, step 2 is not necessary.

3. Launch Xpress DV. Once you have opened the desired project or created a new project, select *Tools -> MediaTool*. The following window will appear:



4. Locate and select the external FireWire drive under Media Drive(s). (NOTE: If the drive does not appear, check that you have created the OMFI MediaFiles folder correctly with proper case and spacing. Also, check to see that the drive is properly connected and recognized by the computer).

Under Project(s), select *All Projects* (This will highlight all items in the Project(s) window). Ensure *Master Clips* is checked then press OK. The following Media Tools Window will appear:

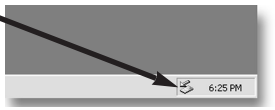


5. Create a new bin (select *File -> New Bin*) or open an existing bin in Xpress DV. Once opened, select all items in the Media Tools window (select *Edit-> Select All*). Drag the contents of the Media Tools Window into the bin. It is now possible to use these clips in the Avid Xpress DV timeline.

Dismounting FireWire Disk Drives from Windows XP, 2000, 98SE and ME Computer Systems

Once you have completed working with your disk drive on a Windows XP, Windows 2000, Windows 98SE or Windows ME computer system, you must first dismount the drive before unplugging it. To do this, simply click on the Stop Device icon at the bottom right side of the Windows task bar. See Below:

The Windows "STOP DEVICE" Icon



Once clicked, your computer system will prompt you to "STOP" the connected FireWire disk drive. This will begin the dismount process. Select the message by clicking on it. The computer will now dismount the disk drive and notify you when it is safe to remove the volume.

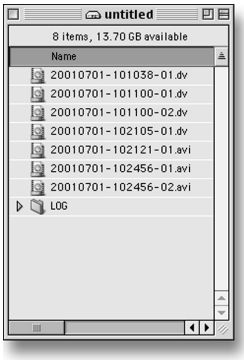
Mounting FireWire Disk Drives to Macintosh Computer Systems

Note: Even if your FireWire disk drive was bought for use on a Macintosh, you MUST first format the drive as a FAT 32 volume on a Windows based computer system for it to work with FireStore.

On a Macintosh, start your computer and simply connect your FireWire disk drive to the computer utilizing a standard 6-pin to 6-pin FireWire cable. Consult your FireWire disk drive documentation for more information. Ensure the required FireWire disk drive drivers have also been loaded onto you computer system (consult your FireWire disk drive's documentation for more information). When mounted, your FireWire disk drive should appear on the computer's desktop:

The FireStore formatted disk drive will appear as a FAT32 volume and hence have a PC label. This is not always the case on OS10 however.

Once you have located your FireWire disk drive on the desktop, double click the disk icon to open it up. Once opened, you will see the following:



Dismounting FireWire Disk Drives from Macintosh Computer Systems

Once you have completed working with your disk drive on a Macintosh computer system,

you must first dismount the drive before unplugging it. To do this, simply select the disk drive on the computer's desktop. It will be marked with a PC symbol. Once selected, drag the drive into the trash. This will then dismount the particular disk drive. See Below:

DR-DV5000 REMOTE CONTROL COMMANDERS

Two remote control commanders came with your DR-DV5000. One is an infrared commander made for use with the infrared remote sensor on the DR-DV5000 front panel and the other features a 3.5mm, 15ft. cable for use when infrared is not an option.

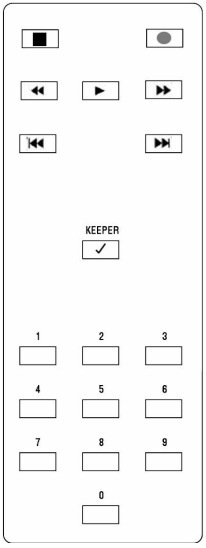
Before using your infrared remote commander, ensure you have batteries installed in the unit (2 x AAA) and that the IR sensor is enabled (see page XX for details).

Before using the wired remote control commander, ensure you have securely inserted the 3.5mm mini jack to the CONTROL port on the DR-DV5000 rear connector panel. You will also require batteries to use this unit (2 x AAA).

The DR-DV5000 wired and infrared remote commanders have the same functionality. Buttons have the same functionality as the similar DR-DV5000 front panel buttons except where noted. Remote buttons do not feature a hold to repeat function like the front panel. Multiple triggers must be repeatedly pressed.

They both feature the following keys

Wired Remote Commander Keypad Layout



Infrared Remote Commander Keypad Layout

The DR-DV5000 wired and infrared remote commanders have the same functionality. They both feature the following keys

STOP
RECORD
BACKWARD SEARCH
FORWARD SEARCH
PLAY
BACK INDEX
FORWARD INDEX

KEEPER -this is the same as the KEEPER function on the DR-DV5000 front panel

NUMERIC KEYPAD (0-9) - these keys currently have no functionality. A future version of DR-DV5000 will use these keys.

TECHNICAL SPECIFICATIONS

Input/Outputs
- DV Video I/O - 25Mb/s (1 x 6pin IEEE- 1394a)
- External HDD I/O - up to 400Mb/s (1 x 6pin IEEE-1394a)
- Slot Internal HDD I/O - up to 400Mb/s (1 x 6pin IEEE-1394a)
- GPI & RS232C Control (1 x 3.5mm mini jack)

Power
- 2-wire AMP Connection (from Battery-Camera)
- Anton/Bauer Digital Battery and IDX Syncron Pass Thru
- 4-pin XLR DC input
- 10V to 17V, 7.5W

Physical Specification
- 2.5lbs (1.1kg) w/ FSHDD-1 Disk Drive
- 4 1/8" x 3 1/2" x 6 1/4" (105mm x89mm x 159mm)

Audio/Video/Timecode Specification
- 25 Mb/s, 8-bit 4:1:1 (NTSC-DV) or 4:2:0 (PAL-DV) video (model dependent)
- SMPTE or DV embedded timecode (Drop or Non-Drop for NTSC-DV)
- 2-ch, 16-bit (48kHz) or 4-ch, 12-bit (32kHz) embedded digital audio

Supported DTE Technology File Formats

RawDV (.dv), AVI Type 1 (.avi), AVI Type 2 (.avi), Canopus AVI (.avi), Matrox AVI (.avi), QuickTime (.mov) or Avid DV-OMF (.omf)

Disk Information
- Internal Disk Type (Slot): FSHDD-1 FireWire Disk Drive
- External Disk Type: User Supplied IEEE-1394a FireWire
- Disk Format: FAT32
- FAT32 FireWire HDD compatible with Windows 98SE, ME, 2000, XP and Mac OS9 and OS10

Compliance and Warranty
- CE, C-Tick and FCC

3.5mm to DB9 Serial Cable

DB9 Connector		3.5MM Jack
Pin 2	->	2 (middle)
Pin 5	->	3 (barrel or shaft)
Pin 3	->	1 (tip)

NOTE: It is possible to download the latest Serial Control Communication Specification for DR-DV5000 from: http://www.focusinfo.com/support

Panel Mount 4-pin XLR Power Input

Pin 1 BLACK (-)
Pin 4 RED (+)

DR-DV5000 RECORD AND CONTROL LCD AND CAMCORDER VIEWFIDER DISPLAY MODES

When used with a JVC GY-DV5000 series camcorder, it is possible to monitor DR-DV5000 status in the camcorder's viewfinder (EVF) and on the LCD display. When DR-DV5000 is connected to a GY-DV5000 and powered, a small "DD" or "CF" icon will appear in the top right side of the camcorder EVF and LCD. Next to this will be four characters which will appear like "092S". The three numerical values (092) represent the remaining disk space on the FireWire disk drive (in this case 92 minutes). The letter displays the DR-DV5000 Record/Playback and Control Mode (S - in this case STOP). The different display modes are listed below:

PLAY/REC MODE	CAM EVF/LCD*	DR-DV5000 LCD	TALLY
Stop	S	STOP	Off
Pause	P blink	‖ PLAY	Off
Play	P	> PLAY	Off
Rec (Pause)	R blink	‖ REC	Blink
Normal Rec (Rec)	R	REC	On
Retro Disk (Stop)	S	L STOP	Off
Retro Disk (Standby)	L blink	L REC	Blink
Retro Cache (Stop)	S	C STOP	Off
Retro Cache (Standby)	C blink	C REC	Blink
Snap (Stop)	S	STOP	Off
Snap (Standby)	G	‖ SNAP	On
Snap (Rec)	G	‖ SNAP	On
Time Lapse (Stop)	S	STOP	Off
Time Lapse (Pause)	T blink	‖ T REC	Blink
Time Lapse (Rec)	T	T REC	On

CONTROL TYPE	CAM EVF/LCD*	DR-DV5000 LCD	TALLY
AV/C* (Stop)	S	A STOP	Off
AV/C* (Rec Pause)	R Blink	‖ A <REC TYPE> REC	Blink
AV/C* (Rec)	R	A <REC TYPE> REC	On
AV/C* (Play Pause)	P Blink	‖ A PLAY	Off
AV/C* (Play)	P	A ALL	Off
Series Rec** (Stop)	F Blink	F STOP	Off
Series Rec (Rec)	F	F REC	On
Split Slave** (Pause)	R Blink	‖ <REC TYPE>STOP	Blink
Split Slave** (Rec)	R	R <REC TYPE>REC	On
Split Slave** (Stop)	S	<REC TYPE>STOP	Off
Syncro Slave (Pause)	Y Blink	‖ Y <REC TYPE>REC	Blink
Syncro Slave (Rec)	Y	Y <REC TYPE>REC	On

NOTES

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